

Q1 2 liters of a sodium water-glass solution (SiO_2 content of 6 wt.% and $\text{Na}_2\text{O}:\text{SiO}_2$ ratio of 1:3.3) are passed through a sheathed glass column (length = 100 cm, diameter = 8 cm), which is packed with 4 liters of an acidic ion-exchanger resin (styrene-divinylbenzene copolymer with sulfonic acid groups, commercially available under the name of @Duolite C20) (at approximately 70 ml/min). The column is operated at a temperature of approximately 7°C . The silicic-acid solution exiting at the lower end of the column has a pH value of 2.3. This solution is brought to a pH of 4.7 for the polycondensation with a 1.0 molar NaOH solution. After this, the gel that forms is aged for another 3 hours at 85°C and then the water is exchanged for acetone with 3 liters of acetone. Then the acetone-containing gel is silylated with hexamethyldisiloxane at room temperature for 5 hours (2.5 wt.% hexamethyldisiloxane per gram of wet gel). After washing the gel with 3 liters of acetone, drying of the gel is conducted in air (3 hours at 40°C , then 2 hours at 50°C and 12 hours at 150°C). The thus-obtained transparent aerogel has a density of 0.15 g/cm^3 , a heat conductivity of 15 mW/mK , a specific surface according to BET of $600 \text{ m}^2/\text{g}$ and is permanently hydrophobic.

Kindly replace the text of Example 3 on page 22 with the following text. No new matter has been added by this amendment.

Q2 The hydrogel is produced as described in Example 2. The hydrogel aged for one hour at 85°C is then washed with 3 liters of warm water and the water is exchanged for acetone with 3 liters of acetone. Then the acetone-containing gel is silylated with hexamethyldisiloxane (2.5 wt.% hexamethyldisiloxane per gram of wet gel) in the presence of 0.1 wt.% trimethylchlorosilane (0.1 wt.% trimethylchlorosilane per gram of wet gel) for 5 hours at room